

Performance Manager™ 2000

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Performance Monitoring System

Bently Nevada is proud to announce Performance Manager 2000, an innovative addition to our line of machinery management products. Performance Manager 2000 is a family of thermodynamic performance monitoring products that will enable you to improve your equipment's efficiency. Performance Manager 2000 Software products will be integrated with Bently Nevada's Data Manager® 2000 Software, providing

you with an enhanced machinery management system. Combining performance and vibration data furnishes you with additional information to diagnose machine problems and to plan maintenance. GTWatch™* is the first in the family of Performance Manager 2000 products.

GTWatch is an innovative software product that helps you maximize the efficiency of your gas turbines, compressors, and pumps. GTWatch enables you to acquire process data online from Bently Nevada's Data Manager® 2000 for Windows NT™, our powerful data

acquisition and display system. Data Manager 2000 software makes machine and process data available to you immediately at any station on your network or remotely using telecommunication. Combining GTWatch and Data Manager 2000 provides you with an integrated system for both performance and vibration information. GTWatch and DM2000, combined with the ability to accurately measure shaft power online using TorXimitor®, enables you to more effectively manage the mechanical and thermodynamic condition of your machines.

* trademark of General Physics Corporation



Figure 1. Online Gas Turbine Efficiency

GTWatch, developed by General Physics Corporation exclusively for Bently Nevada Corporation, is a derivative of General Physics' premier performance monitoring system, EtaPRO. Similar to EtaPRO, **GTWatch** incorporates the extensive performance engineering expertise of General Physics Corporation. **GTWatch** is delivered fully configured for your specific application, incorporating the correction curves and design characteristics that you use for your equipment. This enables you to compare the actual operating performance of your machines to expected performance specifications, helping you optimize generation and fuel consumption, as well as to determine machine problems.

GTWatch is a PC-based, Windows NT™ application, which incorporates features common to all Windows applications, including a graphical user interface (GUI) and compatibility with any spreadsheet. **GTWatch** includes several modules: Gas Turbine Performance, Load Compressor Performance, Pump Performance, Trend Recovery Tool, Database Report Writer, Display Builder and a Configuration Maintenance Utility.

The Gas Turbine Performance Module provides:

- Online heat rate (efficiency) and capacity
- Design heat rate (efficiency) & capacity, corrected to site conditions
- Compressor efficiency (adiabatic & polytropic)
- Data storage for historical trending purposes

The Load Compressor Performance Module provides:

- Actual efficiency (adiabatic and polytropic)
- Polytropic head
- Pressure ratio
- Required power
- Real-time plot, showing where

the compressor is operating on its performance curve

The Pump Performance Module provides:

- Actual and expected capacity
- Actual and expected head
- Actual and expected pump efficiency

The Trend Recovery Tool provides:

- Easy access to historical data for reporting and trending purposes
- High resolution, full color graphical plotting capabilities

The Database Report Writer provides:

- Standard reports, using the highly regarded Crystal Reports
- Automatic report generation
- Report designer capabilities for customized reports

The Display Builder provides:

- A way to incorporate scanned images into your own customized screen
- A way to add or delete data points and labels from screens

The Configuration Maintenance Utility provides:

- Configuration forms for customizing your system
- Data point address

A software package that combines performance and vibration monitoring information gives you a better understanding of your machinery, so you can optimize your operation and maintenance program. For more information on this new product, contact your nearest Bently Nevada sales representative. ■

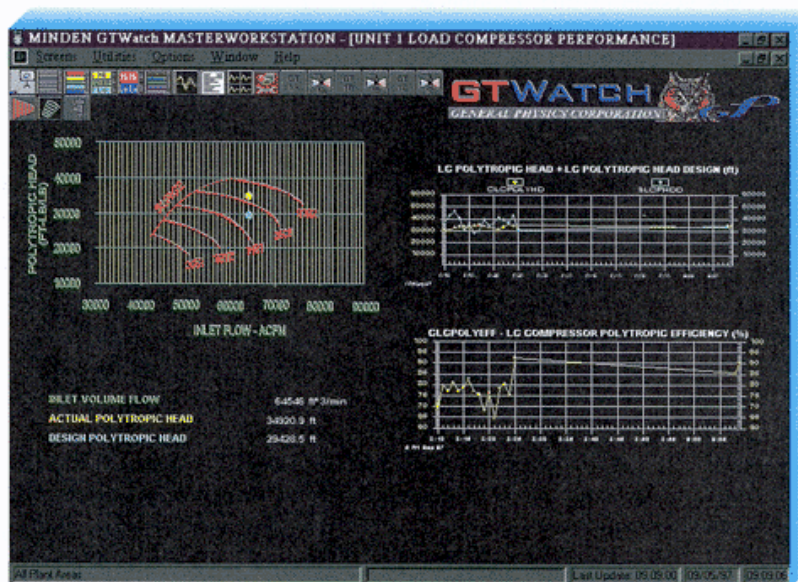


Figure 2. Online Compressor Map